

AZ Republic: Bulkheads
Reporter Questions/Answers

1. What are the water elevation levels behind bulkheads 2 and 3 in the American Tunnel?
What documents exist to show this data?

The following table provides information on the nine bulkheads that were constructed by Sunnyside Gold Corporation to impound the Sunnyside mine pool:

Bulkhead Name	Construction Date	Valve Closed	Bulkhead Elevation	Water Pressure	Notes
F-Level Secondary	1-28-1994	n/a	11,592 ft.	36 psi (calculated)	Prevents direct discharge to Mogul Mine
F-Level Primary	3-8-1994	n/a	11,588 ft.	36 psi (calculated)	Twinned with F-level secondary
B-Level Secondary	4-29-1994	n/a	12,148 ft.	Zero, Above Mine Pool	Would prevent direct discharge to Mogul
B-Level Primary	5-24-1994	n/a	12,148 ft.	Zero, Above Mine Pool	Twinned with B-Level Secondary
Terry Tunnel #1	9-1-1994	7-1996	11,555 ft.	40 psi 8-24-2000	3800 Feet Inby the Tunnel Portal
American Tunnel #1	7-7-1995	9-9-96	10,660 ft.	438 psi 5-14-2001	Initial Valve Closure 7-29-96, Later Reopened
Terry Tunnel #2	9-28-2000	10-5-00	11,521 ft.	Not Measured	Stopped Discharge from Near Surface Fractures
American Tunnel #2	8-24-2001	8-31-01	10,612 ft.	175 psi 8-15-2002	Design Pressure, Ground Surface in N. Fk. 277 psi
American Tunnel #3	11-12-2002	12-3-02	10,595 ft.	Not Measured	Reduced Discharge from Near Surface Fractures

Table 1: Sunnyside Mine Bulkheads

The dates in the “Water Pressure” column are the final pressure measurements taken. Those bulkheads are no longer accessible. There are numerous documents containing detailed information about the Sunnyside Mine bulkheads. Those documents are available at www.mining.state.co.us under Permit File M1977378.

2. What stage is the EPA in the installation of bulkheads at Red and Bonita and at the Gold King Mine?

The Red and Bonita concrete bulkhead was placed on 26th of August, 2015. The bulkhead was installed with a pressure transducer and a pass through pipe for later shut off valve installation. Final grouting work remains before the bulkhead is complete.

No bulkhead has been installed on the Gold King. An assessment to evaluate the feasibility of installing a bulkhead in the Gold King mine has not been completed.

3. What effect would those two bulkheads have on the existing ones in the network of mines in the area?

There is currently no plan to bulkhead Gold King. An assessment to evaluate the feasibility of installing a bulkhead in the Gold King mine has not been completed.

See Answer to question #4 for potential effect of Red and Bonita bulkhead.

4. Would it raise water levels inside the mountain behind the bulkheads 2 and 3 in the American Tunnel? If so, to what level?

American Tunnel bulkhead #2 is believed to have re-saturated a near vertical north-south fracture zone located between bulkheads #1 and #2 to an elevation approximately 59 feet higher than the elevation of the Red and Bonita adit. The Red and Bonita adit is believed to intersect the same or a related fracture zone, and it was the installation of American Tunnel bulkhead #2 that caused the Red and Bonita drainage commencing circa 2002-2004. A technical review team including federal, state and mining engineering consultants will conduct a thorough evaluation of engineering and geologic data before a decision to shut in the R&B bulkhead long term is made.

5. John Reynolds, a consultant for the mining industry based in Durango, delivered a letter to the EPA staff in Colorado last week about a possible consortium of mine operators, proposing a remediation plan. Is this something the EPA would consider? To what extent is the EPA communicating with this group?

EPA has reviewed the proposal from John Reynolds, Durango Geophysical Operations. This proposal has some interesting concepts about modular water treatment systems that may have some application for future water treatment across the mining district. The concept of draining all the water from the American Tunnel and the Sunnyside Mine will take much more study and evaluation by all the stakeholders before any decisions on future water management and treatment can be made. At this time, EPA is not communicating with this group as we are not making long term remediation decisions.